

Max's Design Technology: The Prototype Planner

Learning objective: To understand the importance of prototyping in the design process by planning and evaluating a model before creating a final product.

Max the monkey believes every great invention starts with a simple prototype. Use this planner to sketch and describe your initial model. Think about the materials you will use, how they will be joined, and what you might need to change to make your design even better.

Word bank: prototype · materials · structure · function · evaluation · modification · components · stability

1. The Big Idea: What problem are you trying to solve with your design, and who is your target user? (2 marks)

2. Material Selection: List the materials you have chosen for your prototype and explain why they are suitable for this task. (3 marks)

3. Step-by-Step Construction: List the order in which you will build your prototype. How will you join the components together? (3 marks)

4. Testing and Modification: Once you have built your model, what is one thing that might not work perfectly? How could you change it? (2 marks)

5. Costing: If your prototype components cost £1.50 for card, £0.75 for glue, and £2.25 for wood, what is the total cost to produce one prototype? (2 marks)

Extension challenge: If you had a budget of £10.00, how would you improve your prototype using higher-quality materials? Explain your choices.